



ENERGY STAR Products Partner Meeting

Residential Product Specification Updates

Tuesday October 24th, 2017

Chicago IL



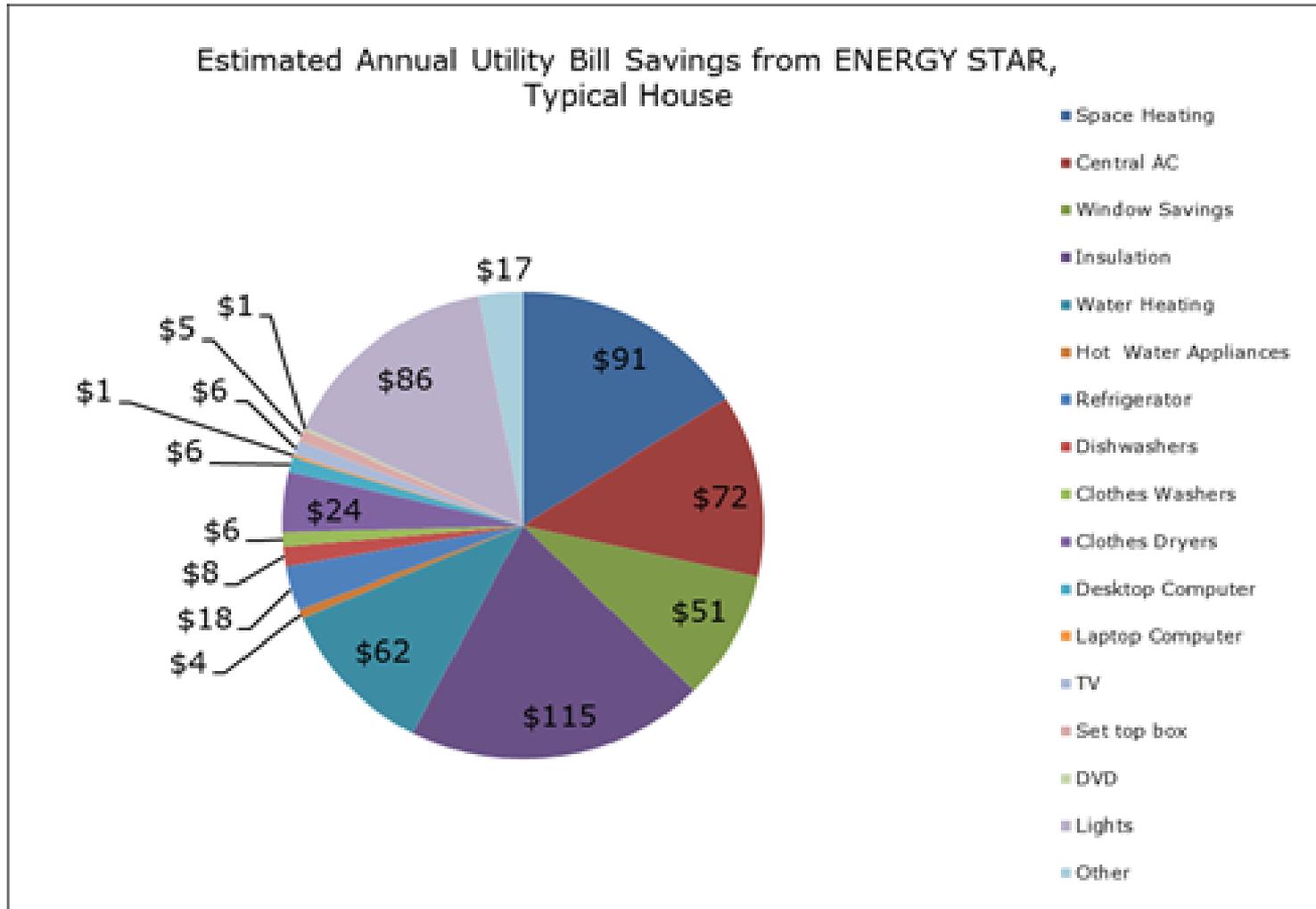
Revisions and New Product Specifications

With over 70 products that can earn the ENERGY STAR, EPA works hard to keep specifications up to date and maintain the value of our investment.

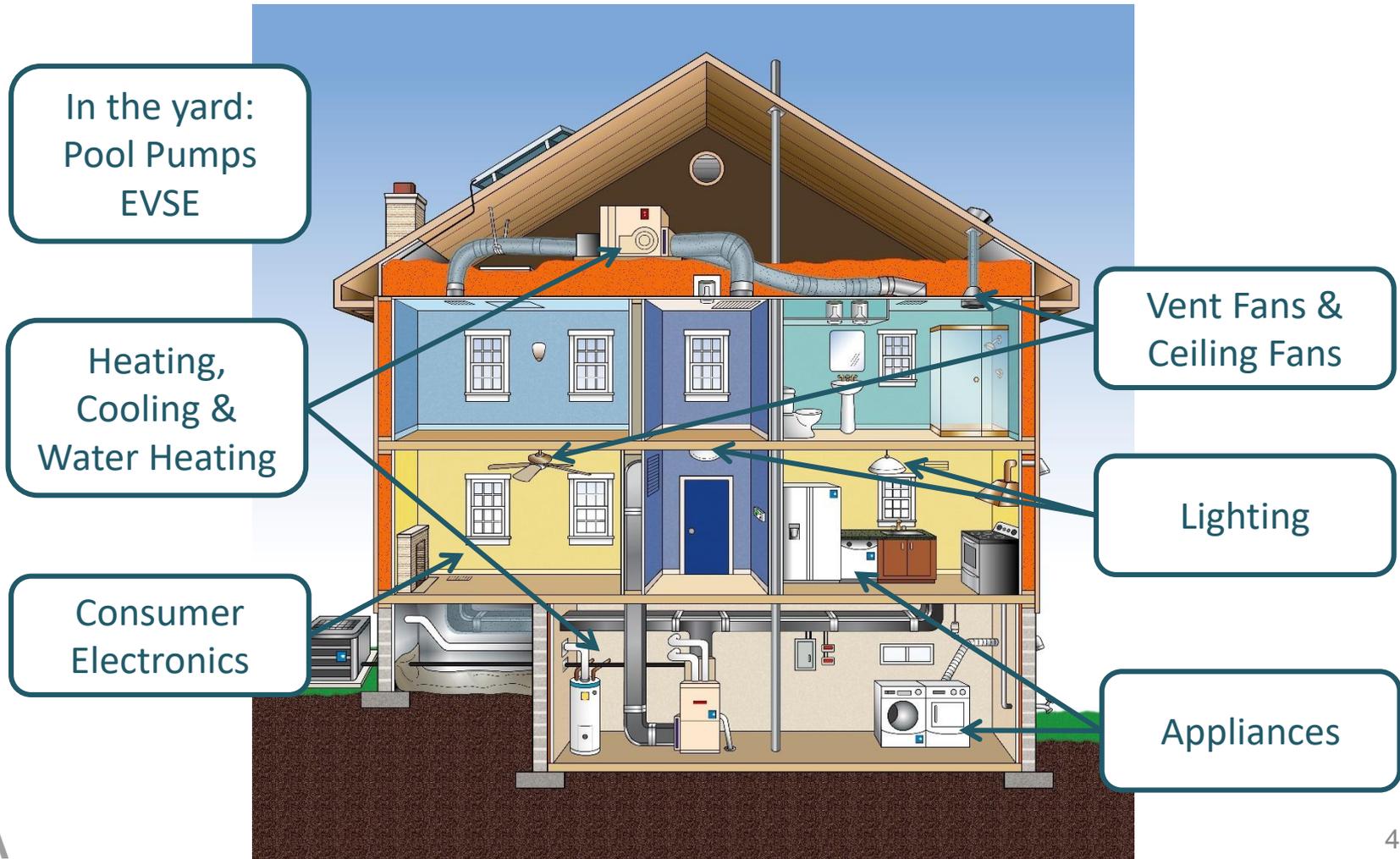
- Revisions:
 - 2 effective in 2017
 - 8 will be completed in 2017
 - Plan to complete 7 in 2018
- New products
 - 5 coming on line in 2017
 - Plan to work on 2 for 2018; others of interest as well



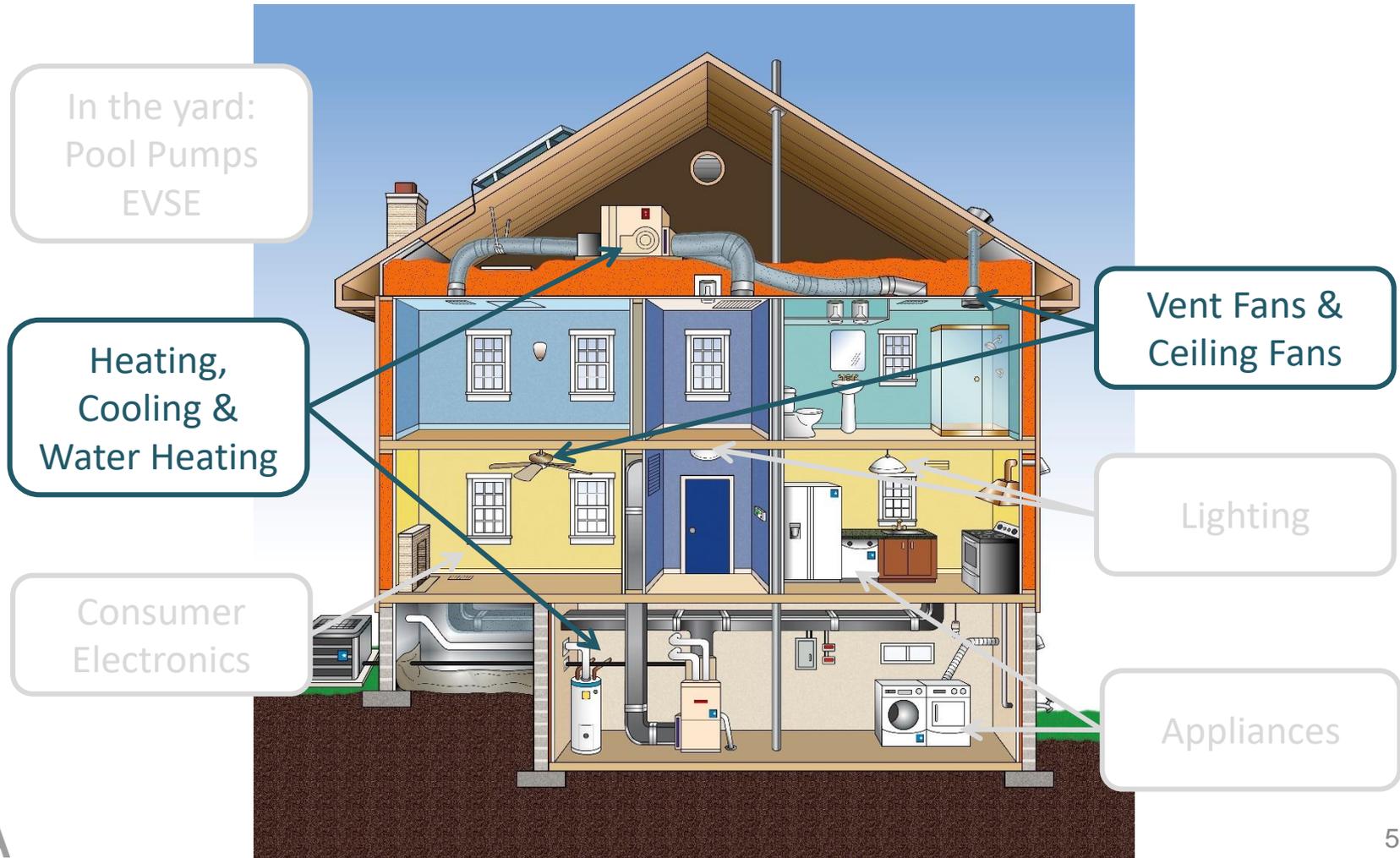
ENERGY STAR Specifications cover most energy used in the home



Tour of ENERGY STAR products in the home – 2017 updates



Tour of ENERGY STAR products in the home – 2017 updates



HVAC – Connected Thermostats



- V1.0 finalized and effective Dec 2016
 - EPA’s first specification based on energy savings as demonstrated with field data
 - Currently 8 certified products from 5 brands
- 2017 and 2018 work
 - Improve the metric to recognize wider variety of savings strategies, tie more closely to metered savings (multi-year project)
 - Allow installations with staged and variable capacity equipment to be part of evaluating savings

HVAC – Residential Heating and Cooling

Furnaces

- Amended specification to drop use of “e” for furnace fan efficiency
- Further fan requirements to be evaluated in a few years

Boilers

- Reviewed for efficiency opportunity – no change expected
- Align with DOE rounding

CAC/ASHP

- Revision in 2018, may or may not include raising levels



HVAC – Residential Water Heaters



- V3.1 finalized and effective May 2017
 - Products can certify using DOE’s new UEF test method
- V3.2 finalized and effective September 2017
 - Minor adjustment to levels
 - Include solar PV water heaters
- No expectation of levels being raised in the next couple years
- Exploring connected criteria – look to the ACEEE Hot Water Forum in March 2018

HVAC – Fans

Ceiling Fans

- V4.0 completed September 2017, effective June 2018
 - Uses Federal efficiency metric, based on weighted average of efficiency in several modes
 - Expands scope to larger fans and hugger fans
 - More realistic performance requirement will allow smaller fans to participate



Vent Fans

- Considering specification amendments now, will continue in 2018 – unlikely to raise levels
- Working to address quality of installation, outside of the spec

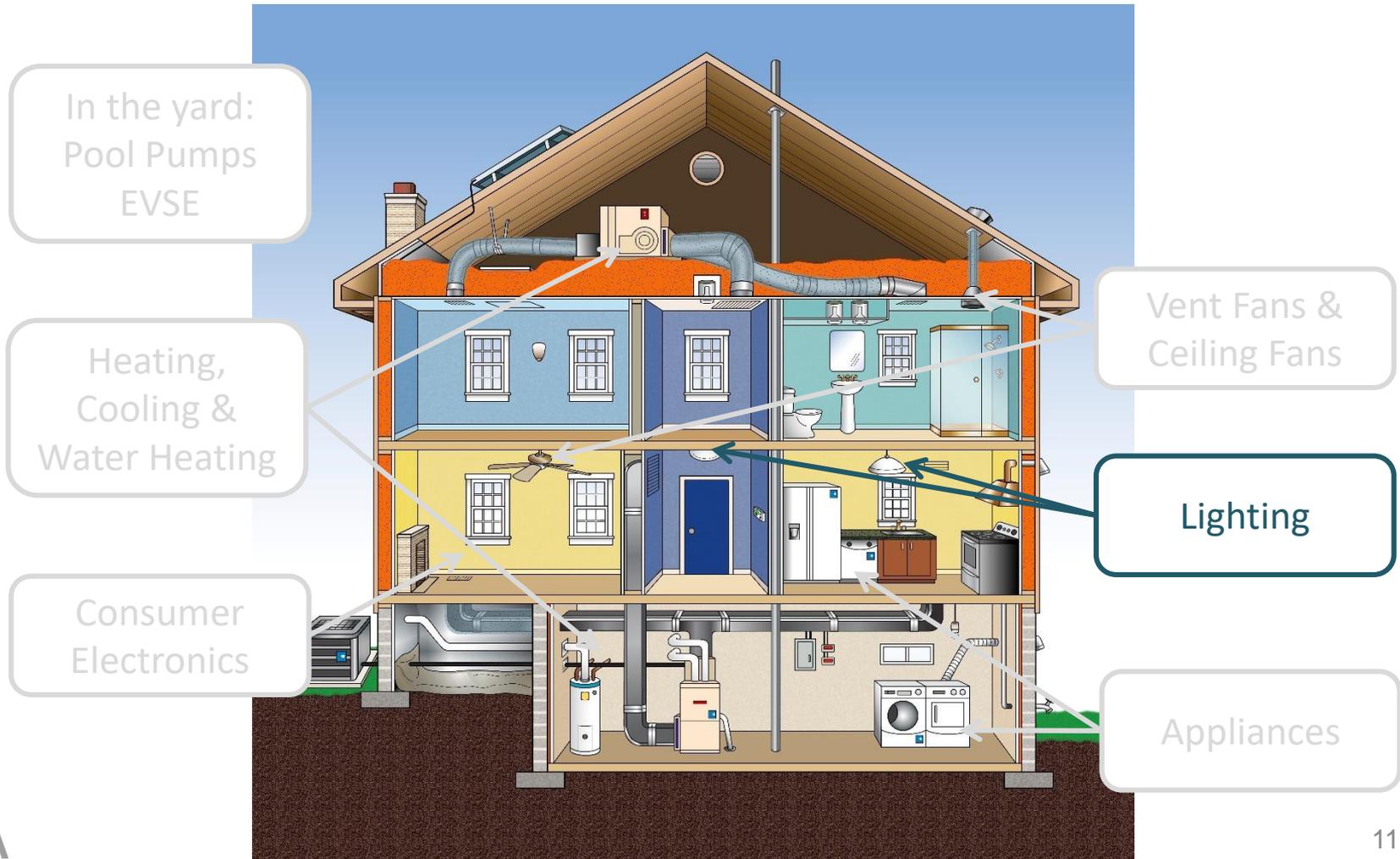
Balanced ventilation

- Long term plan has two parts:
 - Add supply fans to Vent Fan specification
 - Develop H/ERV requirements for US

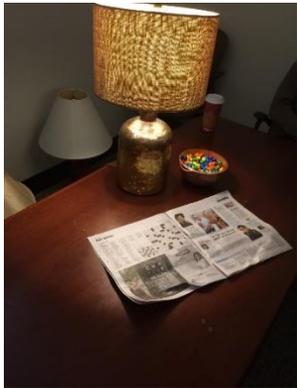


A couple questions on these products?

Tour of ENERGY STAR products in the home – 2017 updates



Lighting – Lamps a.k.a. Light Bulbs



- **V2.0 went into effect Jan 2017**
- **V2.1 October 1, 2017**
 - adds flicker testing and reporting
 - NEMA test and labeling scheme
 - 15,000 hour rated life minimum
 - Connected lamp criteria
 - Standby 0.5 watts
 - Color tuning criteria
 - DOE test method
- **2018 plans:** start a discussion about V3.0

Lighting - Luminaires a.k.a Light Fixtures

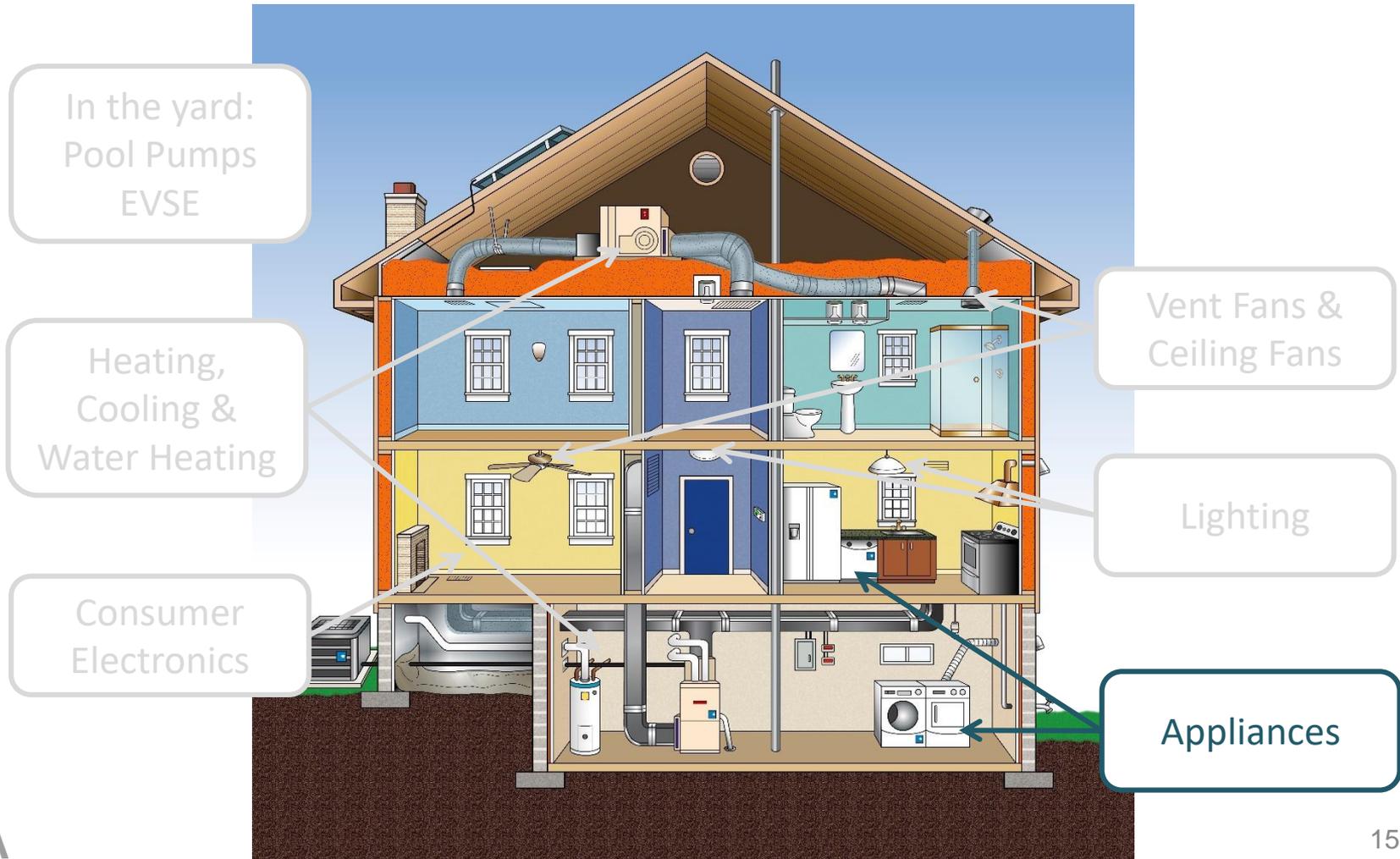
- **V2.0 Completed** May 2015
- **Effective** since June 2016
 - Includes connected criteria, testing for color tuning products, standby limitations
 - Includes a streamlined certification (and verification) approach for using ENERGY STAR certified lamps
 - Retrofit categories of wall sconces and ceiling lights added
- **Review** in 2018 V2.1 update likely





A couple questions on these products?

Tour of ENERGY STAR products in the home – 2017 updates





Appliances – Refrigerators-Freezers

- **V5.0 Completed** May 2013
- **V5.0 Effective** since September 2014
 - Reviewed in 2017 as part of regular review cycle.
 - Determined not to revise at this time due to stable market share and lack of sufficient differentiation
 - Released a Product Review letter on August 10, 2017



Optional Criteria and/or Tests

- V 5.0 includes optional connected criteria
- Test Method to Validate Demand Response
 - **Completed** May 2013
 - Partners seeking to designate their products as Connected on the ENERGY STAR list, and/or take advantage of a 5% allowance, must use the test



Appliances – Clothes Washers 8.0



- **Completed** May 2017
- **Effective** February 5, 2018
 - Scope
 - Increased the capacity scope limitation from 6.0 to 8.0 cu-ft for commercial clothes washers
 - Excluded commercial top load clothes washers from scope
 - Added a definition for residential clothes washer with supplementary wash system

– Efficiency Criteria

Clothes Washer Product Type	Capacity (cu-ft)	IMEF	MEF _{J2}	IWF
Residential Front-loading	> 2.5	2.76	N/A	3.2
Residential Top-loading	> 2.5	2.06	N/A	4.3
Residential Small	1.6 > & ≤ 2.5	2.07	N/A	4.2
Commercial	≤ 8.0	N/A	2.20	4.0

– Savings

- ENERGY STAR residential washers will save, on average, 28% energy and 33% water compared to a product meeting the 2018 federal standard

Optional Criteria and/or Tests

- V 8.0 includes optional connected criteria
- Test Method to Validate Demand Response
 - **Under Development** Fall 2017



Appliances – Clothes Dryers 1.1

- **Completed** May 2017
 - Added a definition for residential clothes dryer with supplementary drying system
 - Efficiency criteria remain unchanged from V 1.0



Optional Criteria and/or Tests

- V 1.1 includes optional connected criteria
- Test Method to Validate Demand Response
 - **Under Development** Fall 2017



Appliances – Dishwashers

- **V6.0 Completed** April 2015
- **V6.0 Effective** since January 2016



Optional Criteria and/or Tests

- V6.0 includes optional connected criteria
- Cleaning Performance Test Procedure
 - **Completed** April 2015
 - EPA encourages brand owner partners to use the test on an **optional** basis
 - Use of the test is required for purposes of ENERGY STAR Most Efficient



Appliances – Room Air Conditioners



- **V4.0 Completed** February 2015
- **V4.0 Effective** since October 2015
 - 10% more efficient than products meeting the federal standard
 - Included installation criteria

Optional Criteria and/or Tests

- V4.0 includes optional connected criteria
- Test Method to Validate Demand Response
 - **Completed** June 2017

Appliances – Other 2018 activity

Anticipated Specification Reviews

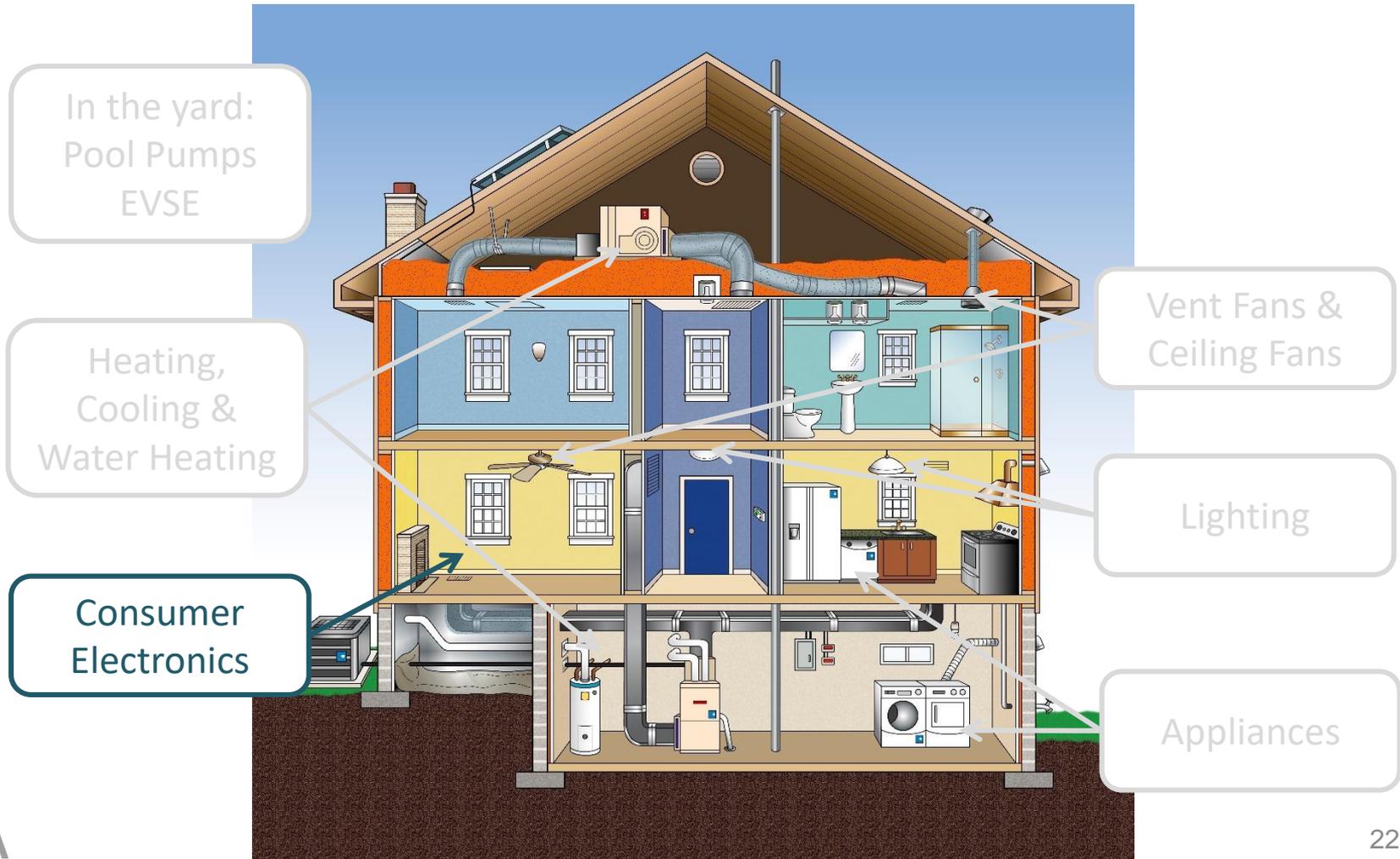
- Room AC
- Room Air Cleaners
- Dehumidifiers

Scoping for New Products

- Cooking



Tour of ENERGY STAR products in the home – 2017 updates





Consumer Electronics

Televisions

- **V8.0** Continue to work on revision.

Audio Video Equipment

- **V3.0 Effective** since 2013
- **V4.0 Launched in July 2017**
 - Anticipated revisions to the test method to better account for real-world use.
 - Focus on revising criteria, pertinent to soundbars and Blu-ray players

Displays

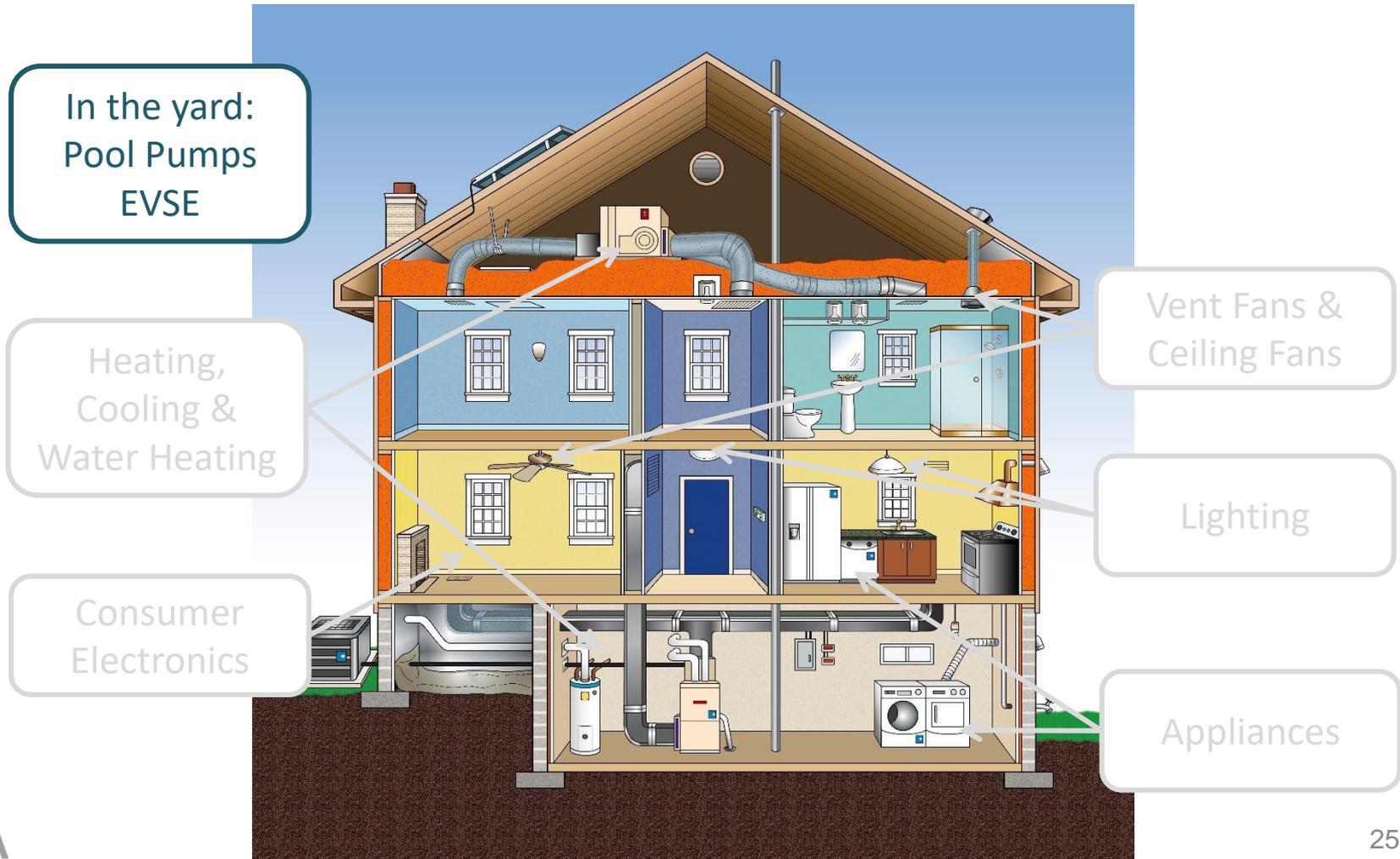
- **Planning to launch V8.0 Revision in Fall 2017**
 - Focus on revising criteria for computer monitors; data collection anticipated for very large commercial signage to assess opportunity to revise criteria.





A couple questions on these products?

Tour of ENERGY STAR products in the home – 2017 updates



Pool pumps

- **V2.0 and V3.0 In development now**
- **V2.0 effective 2018**
 - Expand product scope (pumps for above-ground pools, pressure wash booster pumps)
 - Adopt WEF test method
 - Once data is available, include replacement motors
 - More stringent requirements for pumps for in ground pools
 - Updates to connected criteria
- **V3.0 effective July 2021, in line with DOE standards**
 - Unlike usual, can predict market changes well enough to propose increased stringency in anticipation of the standard



New: Electric Vehicle Chargers

- **V1.0 Completed** Dec 2016
 - Addresses standby losses
 - Sets criteria for network connectivity
- **Working now on V2.0**
 - Add fast charge



Optional Criteria

- V1.0 includes optional connected criteria
 - Open Standards
 - Description of Demand Response capability



Summary of 2018 Preliminary Plans: Revisions with Drivers

- **Electronics:** Audio/Video (MS), Televisions (New Test Method), Computers (MS), Displays (MS), Imaging Equipment (MS), Small Network Equipment (VA), Servers (Add Active), Enterprise Storage (New Test Method)
- **Heating, Ventilating, and Cooling:** Central AC (time since last revision, Recognize Staged Capacity), Vent Fans (time since last revision, add supply fans), Dehumidifiers (MS), Smart Thermostats (address broader range of savings strategies w revised metric; no spec revision)
- **Appliances:** Room Air Conditioners (Path for Inverters), Air Cleaners (RPP), Demand Response Tests Laundry
- **Commercial Food Service:** Commercial Dishwashers (MS), Vending Machines (time since last revision), Steam Cookers (MS), Commercial Ovens (MS)
- **Other:** Water Coolers (MS), EVSE (utility and partner interest in fast charge), Roofs (behind code)



Questions on anything



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